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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/622,536

12/07/2000

Yu Suzuki

05905.0114

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22852

7590

03/12/2008

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EXAMINER

PRENDERGAST, ROBERTA D

ART UNIT

PAPER NUMBER

2628

MAIL DATE

DELIVERY MODE

03/12/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/622,536	<b>Applicant(s)</b> SUZUKI ET AL.	
	<b>Examiner</b> ROBERTA PRENDERGAST	<b>Art Unit</b> 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/27/2008 has been entered.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Independent claim 16 discloses the limitation of "A computer-readable recording medium including a computer program for causing a computer to serve as an image generating device...". There is no disclosure in the specification of a "computer-readable recording medium".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrus et al. U.S. Patent No. 6058397 in view of Hon Wai Chun; Ming-Kit Lai, E.; “Intelligent critic system for architectural design”, IEEE Transactions on Knowledge and Data Engineering, Volume 9, Issue 4, July-August 1997, pages 625–639, hereinafter Chun et al. and de Hond U.S. Patent No. 5796395.

Referring to claim 15, Barrus et al teaches an image generating method for generating an image of a component completed by arranging a plurality of components in a plurality of divided areas in a virtual three-dimensional space, the method comprising: storing, in advance, data on the plurality of areas, data on the plurality of components (Abstract; Figs. 2-5, 20-23 and 26; column 1, lines 5-10; column 2, lines 45-60; column 3, lines 3-12 and 19-52; columns 6-7, lines 66-10; column 7, lines 30-65; column 13, lines 22-53, i.e. a storage database connected to the computer through the network, wherein a virtual reality environment is divided up into locales indicating areas of a virtual reality scene wherein each locale/area includes elements such as a cup, saucer and table, is understood to be the storage means data on the plurality of areas/locales and data on the plurality of components/elements), a first parameter indicating the characteristics of the plurality of areas and directions in which the plurality of components are to be arranged in each area, and a second parameter indicating at least types and sizes of the plurality of components and environments where the plurality of components are to be arranged (Figs. 13-16; column 13, lines 22-53; column 14, lines 25-63; column 15, lines 30-65, i.e. the Locale Info table containing information about a “locale” defined as a single section of a virtual environment, the CompositionList

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table containing information regarding the components/elements found in the locale and the PartsList table containing information regarding the position of the parts in the locale are understood to be the first parameter indicating characteristics of the plurality of areas and directions in which the plurality of components/elements are to be arranged in each area, the names of the components/elements indicate the types of components and the sizes are given in the primitive table and further the size of the component is required for scaling the components to fit within the locale); selecting, based on the characteristics of the plurality of areas included in the first parameter, one component from among the plurality of components for which the second parameter has been designated (Figs. 13-16; column 13, lines 22-53; column 14, lines 25-63; column 15, lines 30-65, i.e. the creation of the PartsList table indicates that the components have been selected from a plurality of components); arranging, based on the directions in which the plurality of components are to be arranged in each area included in the first parameter, the selected component in any of the areas (Figs. 13-16; column 13, lines 22-53; column 14, lines 25-63; column 15, lines 30-65; columns 15-16, lines 66-39, i.e. the components are arranged based on position information indicating the position of the components within the locale and using transformation information to move an object/component to a different position within the Locale's coordinate system indicates that the components are arranged based on the direction information included in the first parameter); and generating image data to form the image of the component completed by arranging the selected component in any of the areas (Figs. 2-4 and 20; column 5, lines 19-27; column 6, lines 54-65; column 8, lines 14-39; column 10, lines

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35-61; column 17, lines 9-24 and 40-50; column 19, lines 15-66; column 14-47, i.e. the 3-D environment is created and stored in the database and the server obtains information regarding the locales requested by the browser from the tables and prepares generates a final image to be sent to the browser for display).

Barrus et al. does not specifically teach selecting, based on the characteristics of the plurality of areas included in the first parameter, one component from among the plurality of components for which the second parameter has been designated and wherein the plurality of components are selected based upon at least one condition corresponding to a resident of the virtual space.

Chun et al. teaches selecting, based on the characteristics of the plurality of areas included in the first parameter, one component from among the plurality of components for which the second parameter has been designated (Figs. 1-6; pages 627-628, section 4.2 Object Knowledge Base, 1<sup>st</sup>-2<sup>nd</sup> and 4<sup>th</sup>-5<sup>th</sup> paragraphs; pages 636-637, section 7-7.6, i.e. characteristics of the plurality of areas, such as a kitchen area or a bedroom area, are used to define which components should be selected for a particular area, since a stove, refrigerator and/or dining room table would be possible components for a kitchen area but would not belong in a bedroom area/locale and thus a first parameter would include information regarding the type of area being generated/modified).

De Hond teaches wherein the plurality of components are selected based upon at least one condition corresponding to a resident of the virtual space (column 1, lines 15-31; column 4, lines 3-45, i.e. the user/resident designs their own virtual space and

provides information about himself or herself such that the information provided affects the appearance of the virtual house/space).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Barrus et al. to include the teachings of Chun et al. and de Hond because defining where objects should be placed based on floor plan design and interior design principles allows an image generating device to arrange components in the virtual space based on well known user preferences defined in the FPDx and IDx design rules (Chun et al.: page 625, section 1 Introduction; page 636, section 7 The IDx Critic Module and section 7.2 Proximity of Objects) and selecting components based upon at least one condition corresponding to a resident of the virtual space provides a virtual space that reflects the personality of the user by communicating their interests thus adding realism to the virtual space (column 1, lines 15-31).

Referring to claim 12, the rationale for claim 15 is incorporated herein, Barrus et al., as modified above, teaches an image generating device for generating an image of a component completed by arranging a plurality of components in a plurality of divided areas in a virtual three-dimensional space, the device comprising: storage means; selection means; arranging means; and an imaging unit capable of performing the method of claim 15 (Abstract; Figs. 1-2, 20-21, 24 and 26; column 3, lines 19-52; columns 6-7, lines 54-10; column 19, lines 13-62; columns 19-20, lines 63-47, i.e. a storage database connected to the computer through the network, wherein a virtual reality environment is divided up into locales that can be modified indicates a system

having a computer containing a display, a CPU, memory and is connected to a network such that a server generates a final image containing the elements/components in the virtual three-dimensional locale requested by the browser).

Referring to claim 16, the rationale for claim 15 is incorporated herein, Barrus et al., as modified above, teaches a computer-readable recording medium including a computer program for causing a computer to serve as an image generating device for generating an image of a component completed by arranging a plurality of components in a plurality of divided areas in a virtual three-dimensional space, the computer program causing the computer to execute the method of claim 15 (Figs. 11(element 1108) and 26; column 9, lines 33-40; column 11, lines 48-56; column 12, lines 41-56; column 13, lines 33-46; columns 13-14, lines 66-11; columns 14-15, lines 64-10; column 19, lines 13-27; column 20, lines 39-54; column 21, lines 40-41, i.e. it is inherent that a system having a server and multiple computers for performing the method of claim 15 and is connected to a network such that a server generates a final image containing the elements/components in the virtual three-dimensional locale requested by the browser program further includes a computer-readable medium for storing the programs required to perform the method as claimed).

Referring to claim 17, the rationale for claim 12 is incorporated herein, Barrus et al., as modified above, teaches the image generating device according to claim 12, wherein the at least one condition includes one or more of gender, age, marital status, family make-up, health condition, and financial status (de Hond: column 4, lines 34-45, i.e. the resident/user inputs information regarding their zip code, which may be



understood to be an indicator of financial/social status, and further inputs information regarding their age group and gender/sex).

### ***Response to Arguments***

Applicant's arguments with respect to claims 12, 15 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 2/27/2008 have been fully considered but they are not persuasive.

Applicant argues that Chun et al. does not teach selection means for selecting, based on the characteristics of the plurality of areas, one component from a plurality of components.

Examiner respectfully submits that Chun et al. teaches wherein a user creates or modifies the floor plan or interior design using the CAD front-end and ICADS graphic objects, see Figs. 1-6; pages 627-628, section 4.2 Object Knowledge Base, 1<sup>st</sup>-2<sup>nd</sup> and 4<sup>th</sup>-5<sup>th</sup> paragraphs; and page 630, section 4.4 Inference Engine, Steps 1 and 2 thus implicitly teaching a selecting means since the creation or modification of an interior design requires the selection of a plurality of ICADS graphic objects, such as furniture objects.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERTA PRENDERGAST whose telephone number is (571)272-7647. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roberta Prendergast/  
Examiner, Art Unit 2628  
3/3/2008

/Ulka Chauhan/  
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